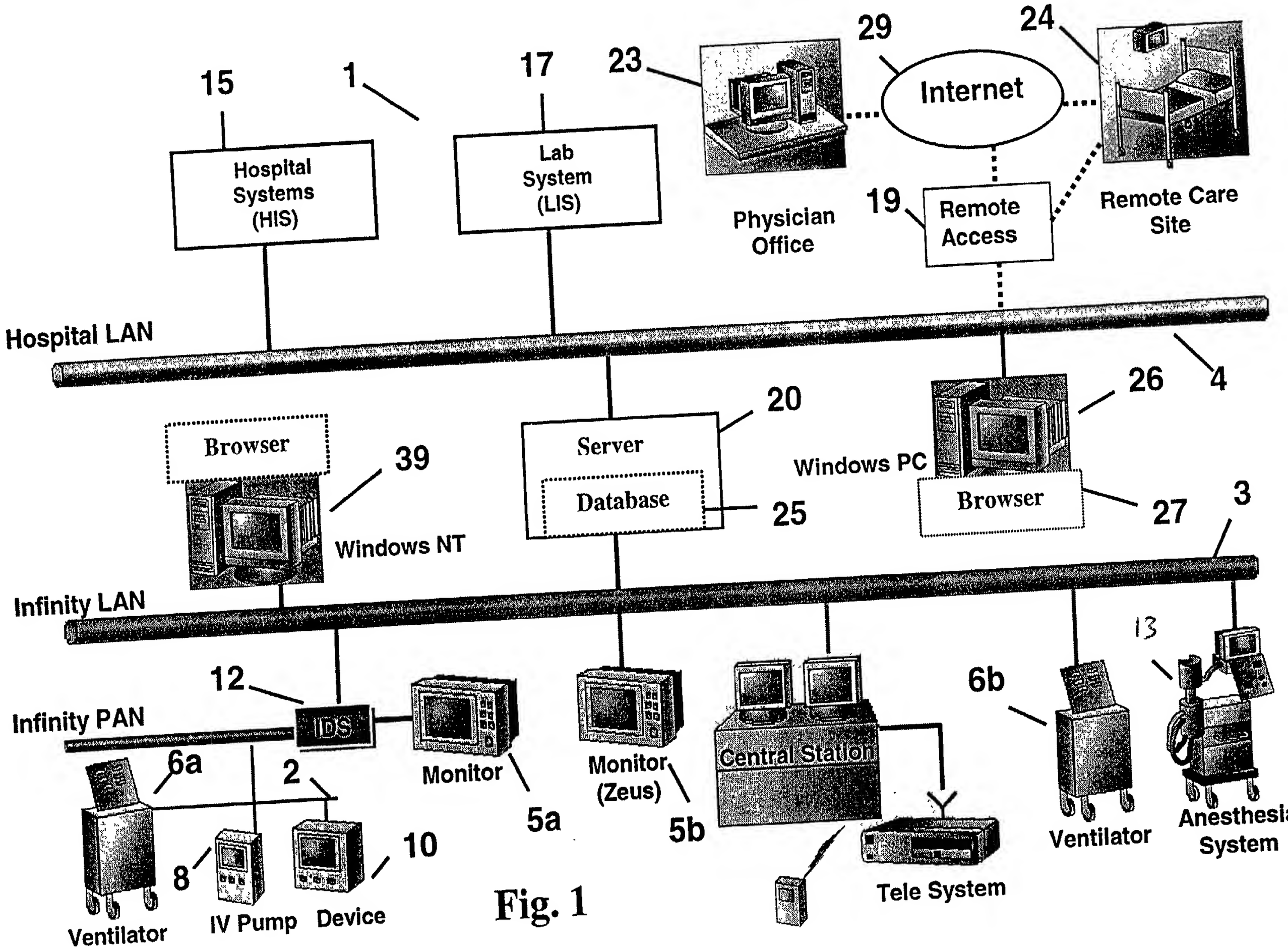

15
1
17
23
29
24
Hospital Systems (HIS)
Lab System (LIS)
Internet
Physician Office
19
Remote Access
Remote Care Site
Hospital LAN
4
20
26
Browser
39
Server
Database
25
Windows PC
Browser
27
3
Windows NT
Infinity LAN
13
12
Infinity PAN
IDS
6a
2
Monitor
5a
Monitor (Zeus)
5b
Central Station
6b
Ventilator
Anesthesia System
8
10
IV Pump
Device
Tele System
Ventilator

Fig. 1

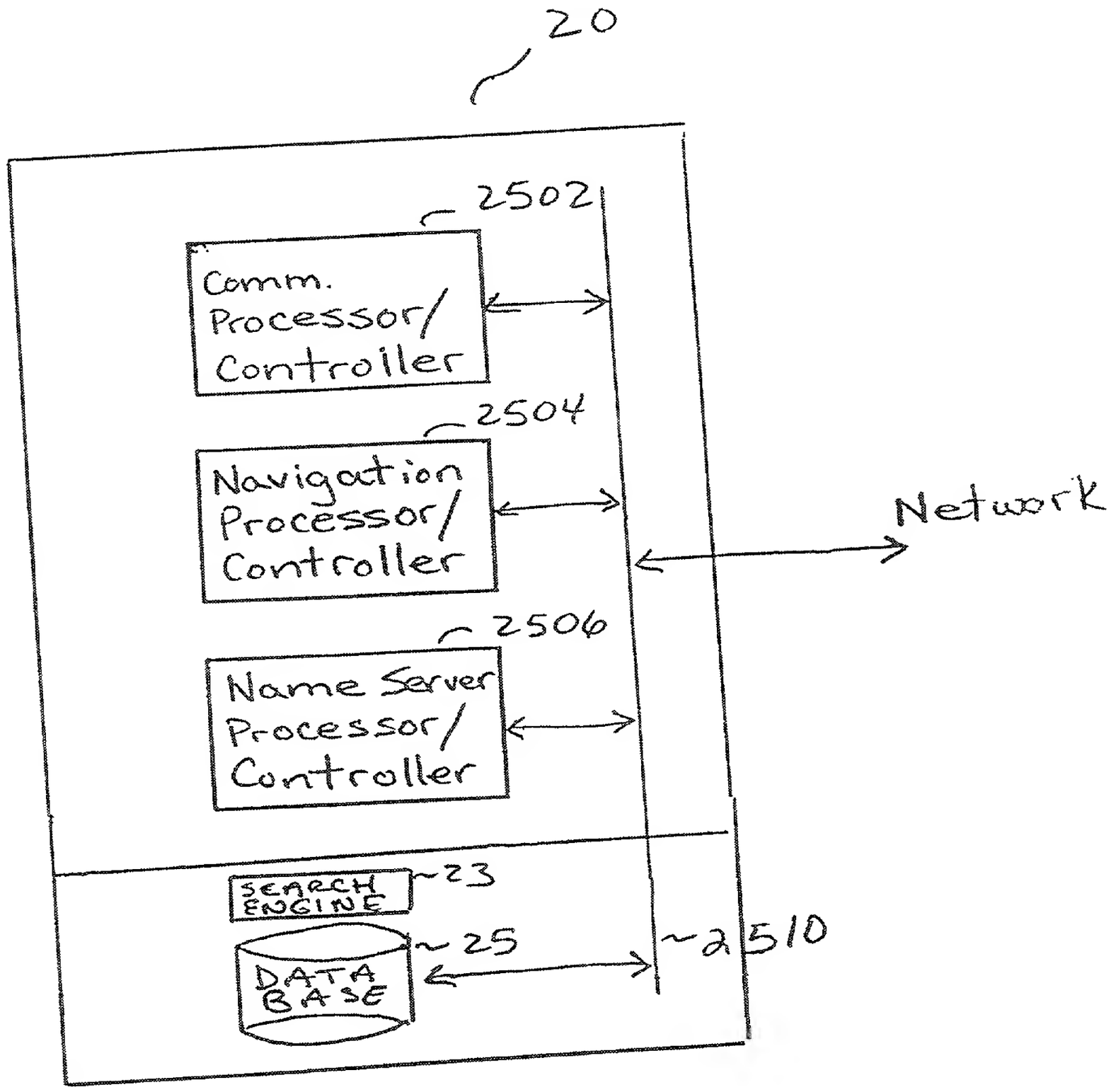

20
2502
Comm. Processor/ Controller
2504
Navigation Processor/ Controller
Network
2506
Name Server Processor/ Controller
SEARCH ENGINE
23
25
DATA BASE
2510

FIG. 2A

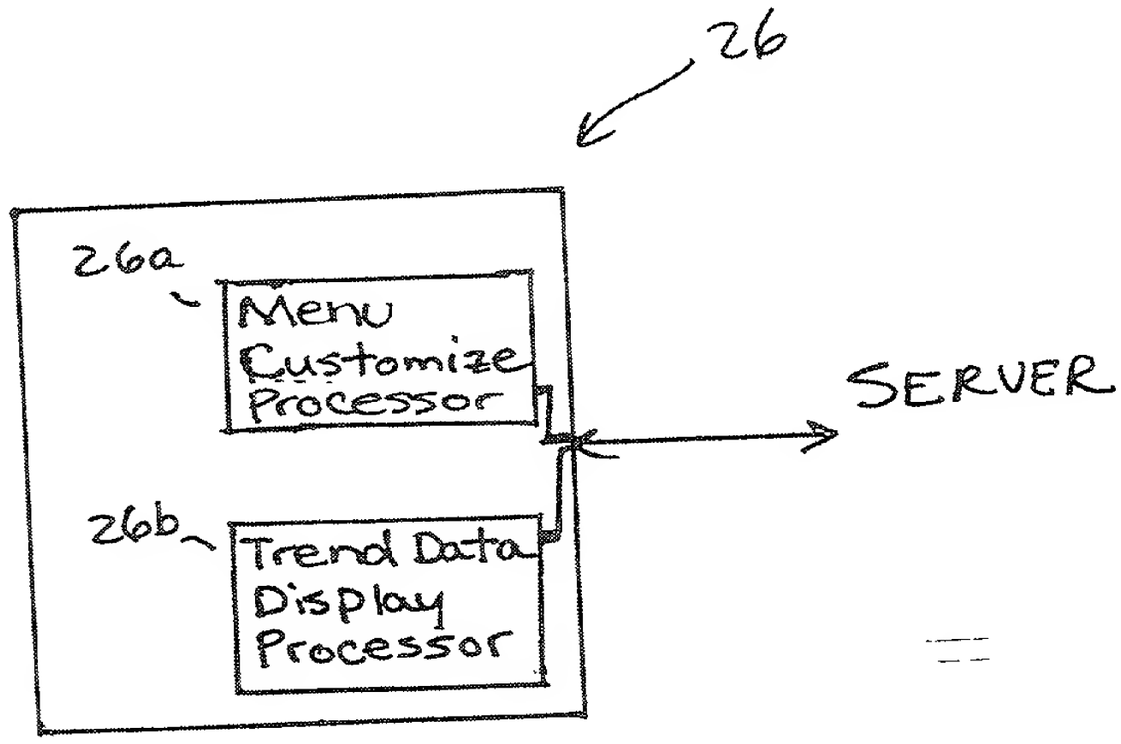

26
26a
Menu Customize Processor
SERVER
26b
Trend Data Display Processor

FIG. 2B

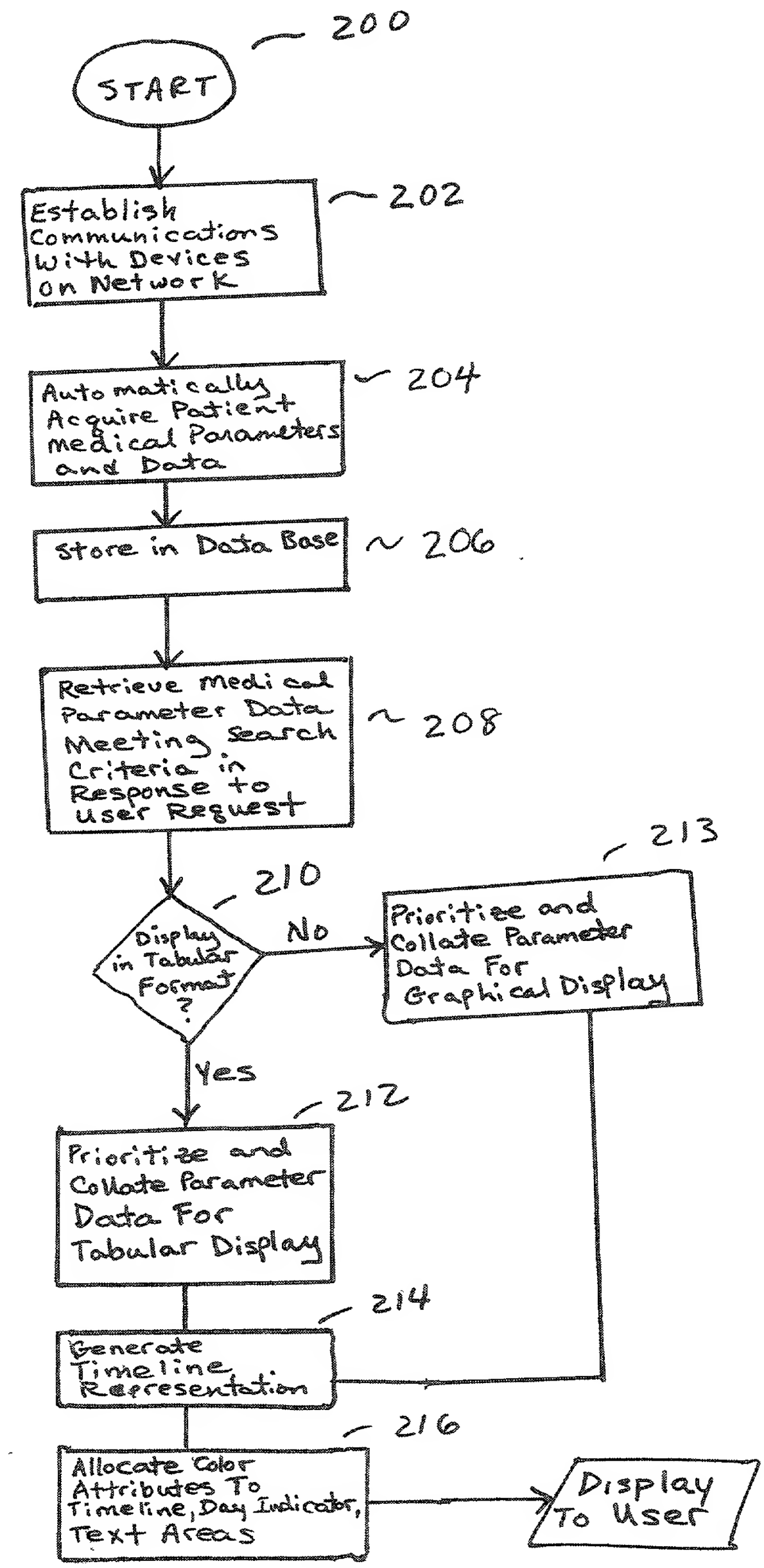

200
START
Establish Communications With Devices on Network
202
Automatically Acquire Patient medical Parameters and Data
204
Store in Data Base
206
Retrieve Medical Parameter Data Meeting Search Criteria in Response to User Request
208
210
Display in Tabular Format ?
No
213
Prioritize and Collate Parameter Data For Graphical Display
Yes
212
Prioritize and Collate Parameter Data For Tabular Display
214
Generate Timeline Representation
216
Allocate Color Attributes To Timeline, Day Indicator, Text Areas
Display To User

FIG. 2C

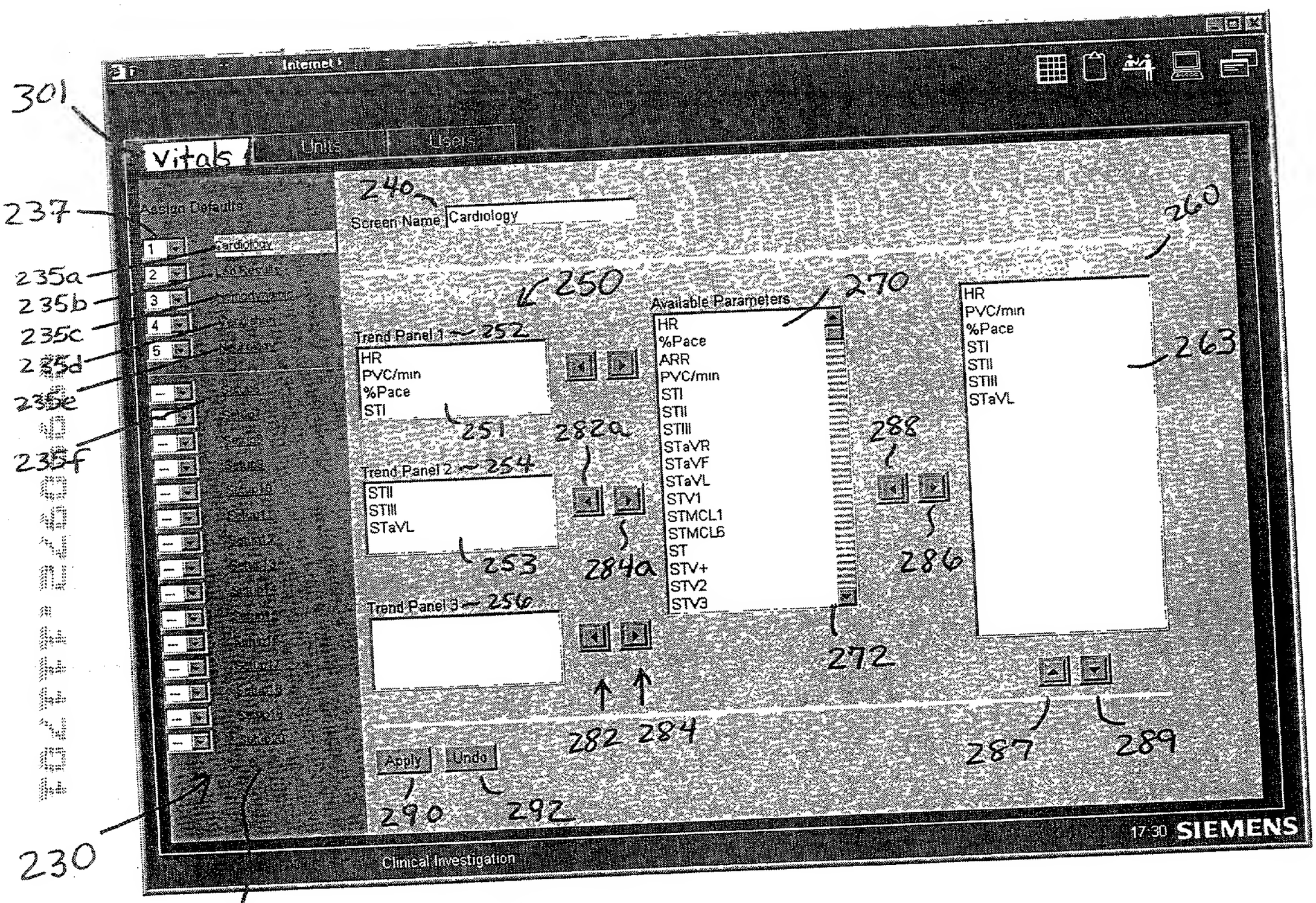

Internet
Vitals
Units
Users
Assign Defaults
1
Cardiology
2
3
4
5
Screen Name
Cardiology
Trend Panel 1
HR
PVC/min
%Pace
STI
Trend Panel 2
STII
STIII
STaVL
Trend Panel 3
Available Parameters
HR
%Pace
ARR
PVC/min
STI
STII
STIII
STaVR
STaVF
STaVL
STV1
STMCL1
STMCL6
ST
STV+
STV2
STV3
HR
PVC/min
%Pace
STI
STII
STIII
STaVL
Apply
Undo
17:30
SIEMENS
Clinical Investigation
301
237
235a
235b
235c
235d
235e
235f
230
235
240
250
251
252
253
254
256
260
263
270
272
282a
284a
282
284
286
287
288
289
290
292
300

FIG. 3A

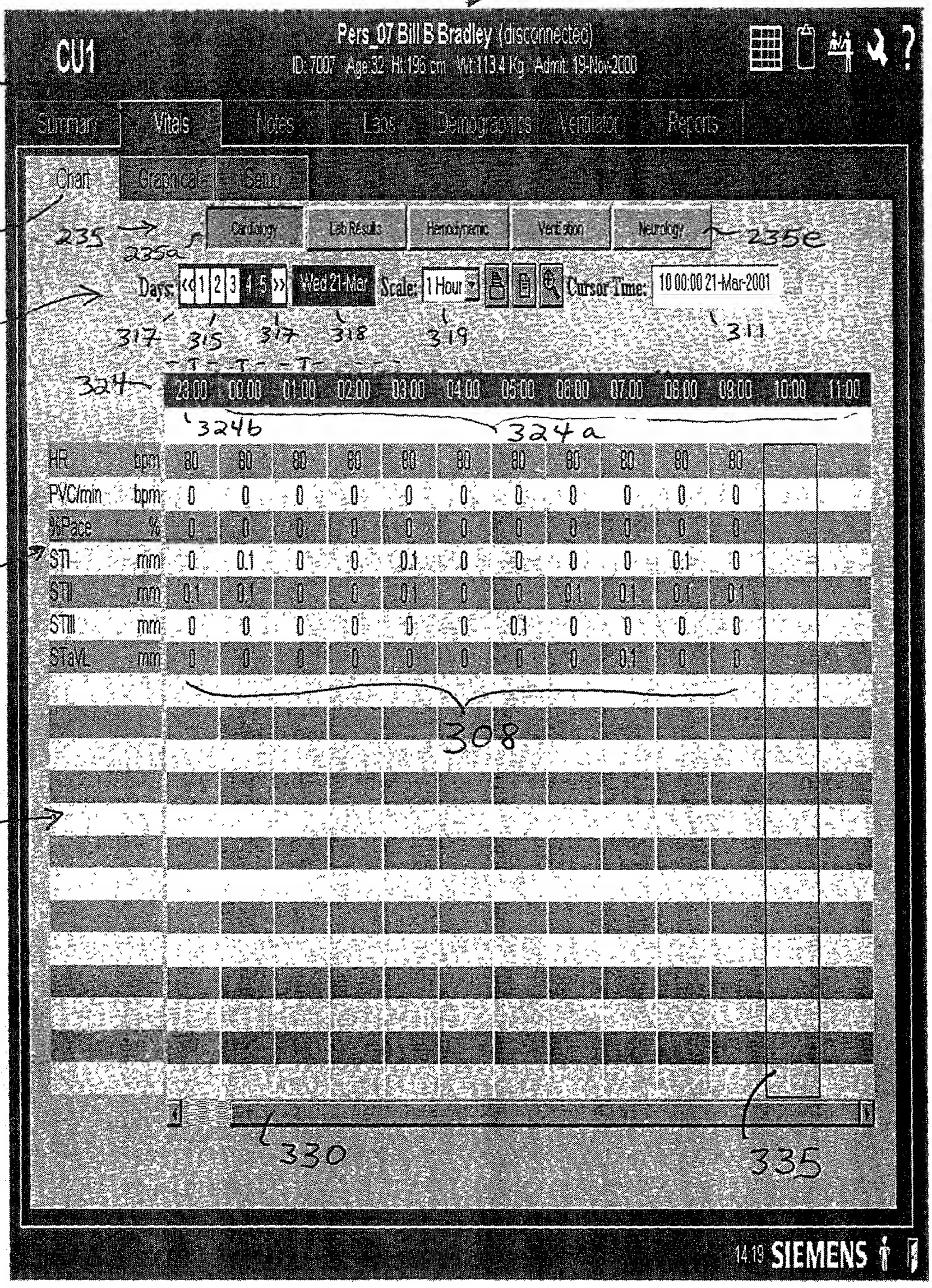
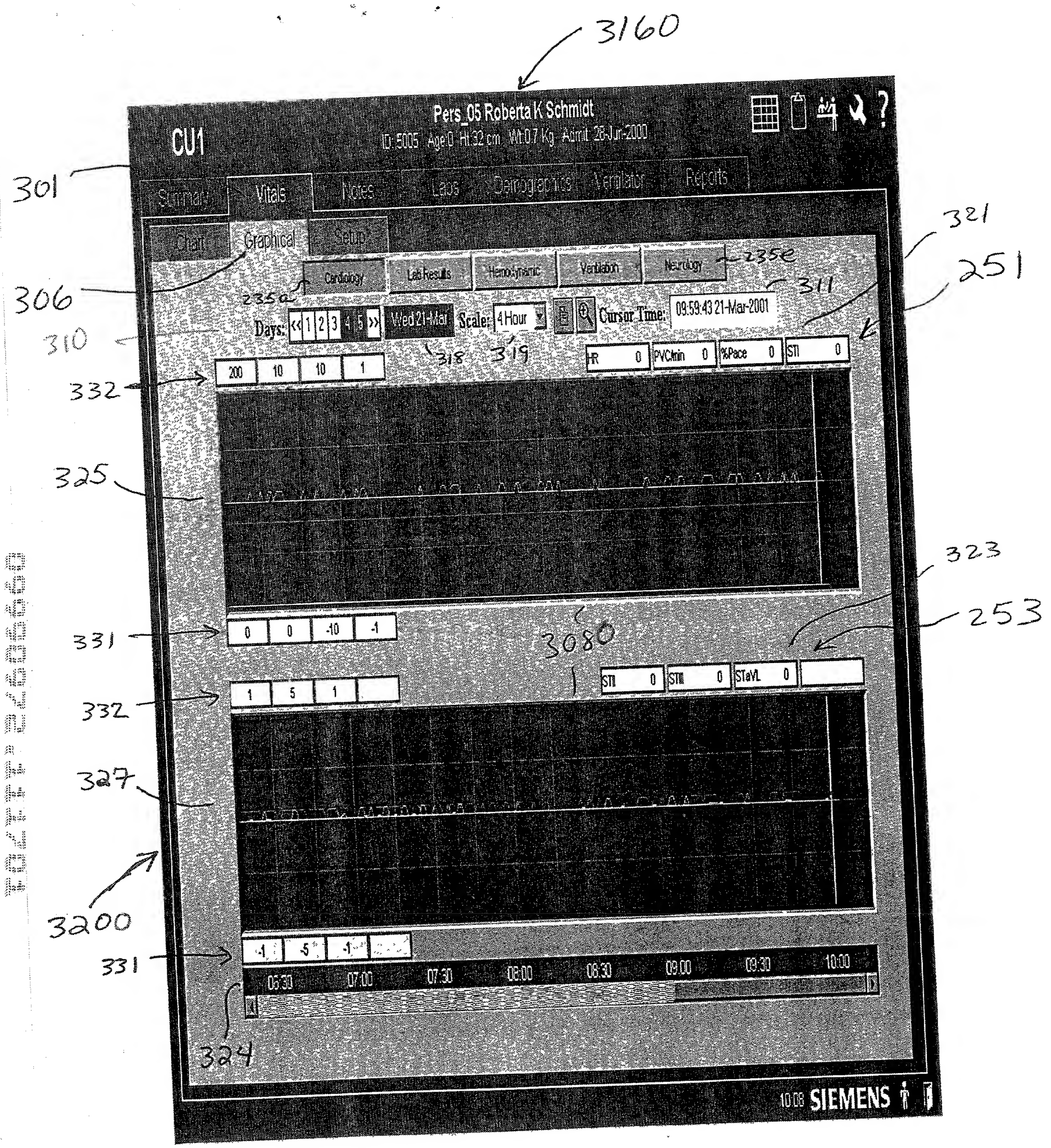

3160
CU1
Pers_07 Bill B Bradley (disconnected)
ID: 7007 Age:32 Ht:195 cm Wt:113.4 Kg Admit: 19-Nov-2000
Summary
Vitals
Notes
Labs
Demographics
Ventilator
Reports
Chart
Graphical
Status
Cardiology
Lab Results
Hemodynamic
Ventilation
Neurology
Days:
1 2 3 4 5
Wed 21-Mar
Scale:
1 Hour
Cursor Time:
10 00:00 21-Mar-2001
23:00 00:00 01:00 02:00 03:00 04:00 05:00 06:00 07:00 08:00 09:00 10:00 11:00
HR bpm 80 80 80 80 80 80 80 80 80 80 80
PVC/min bpm 0 0 0 0 0 0 0 0 0 0 0
%Pace % 0 0 0 0 0 0 0 0 0 0 0
STI mm 0 0.1 0 0 0.1 0 0 0 0 0.1 0
STII mm 0.1 0.1 0 0 0.1 0 0 0.1 0.1 0.1 0.1
STIII mm 0 0 0 0 0 0 0.1 0 0 0 0
STaVL mm 0 0 0 0 0 0 0 0 0.1 0 0
14:19 SIEMENS
301
305
310
235
235a
235e
317
315
317
318
319
311
324
324b
324a
263
320
308
330
335
303

FIG. 3B


3160
CU1
Pers_05 Roberta K Schmidt
ID: 5005 Age:0 Ht:32 cm Wt:0.7 Kg Admit: 26-Jun-2000
301
Summary
Vitals
Notes
Labs
Demographics
Ventilator
Reports
Chart
Graphical
Setup
306
Cardiology
Lab Results
Hemodynamic
Ventilation
Neurology
235a
235e
321
251
311
310
Days: << 1 2 3 4 5 >>
Wed 21-Mar
Scale: 4 Hour
Cursor Time: 09:59:43 21-Mar-2001
318
319
HR 0
PVC/min 0
%Pace 0
STI 0
332
200 10 10 1
325
323
253
331
0 0 -10 -1
3080
STII 0
STIII 0
STaVL 0
1 5 1
327
3200
-1 -5 -1
05:30 07:00 07:30 08:00 08:30 09:00 09:30 10:00
324
10:08 SIEMENS

3030

FIG. 3C

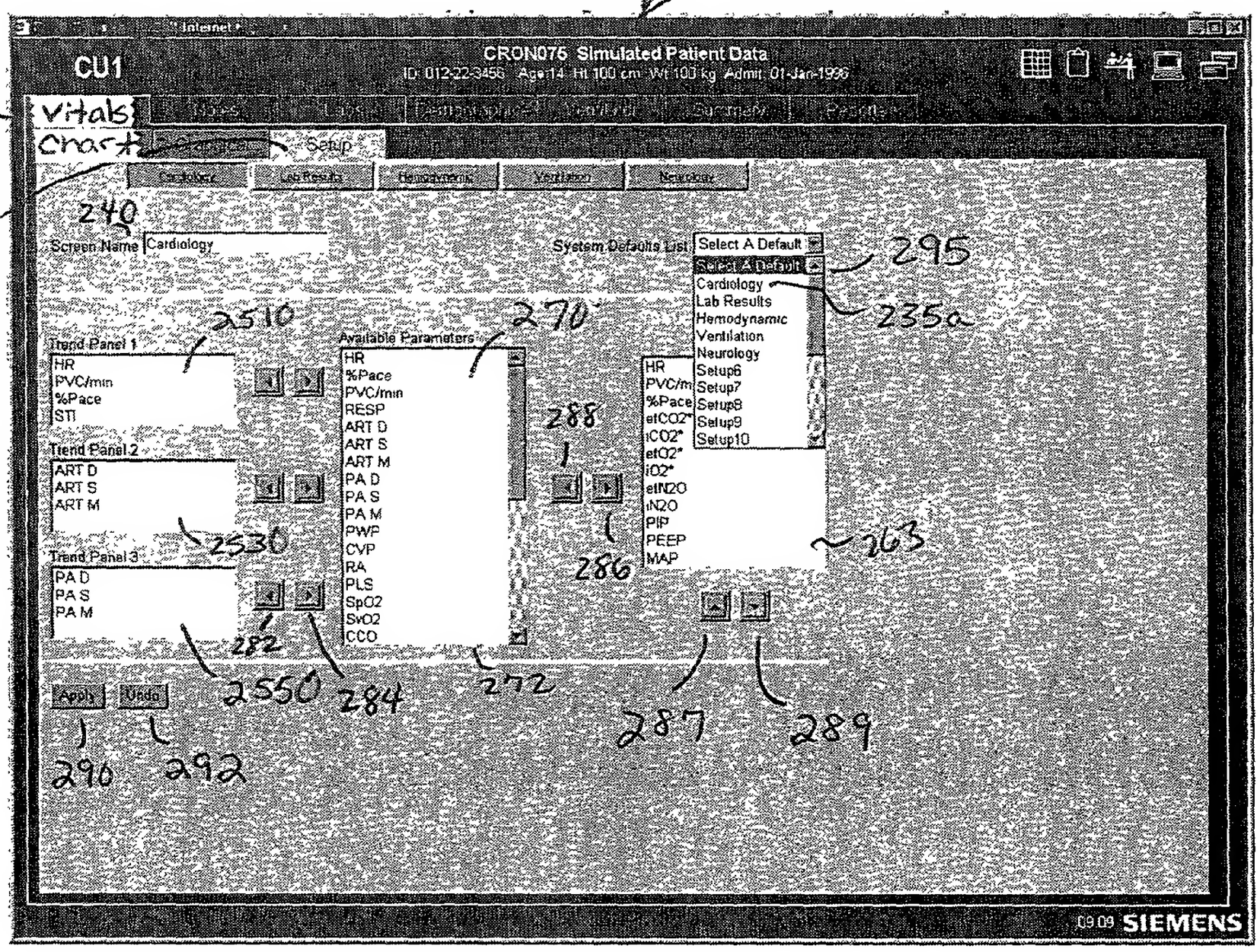

3160
301
307
CU1
CRON076 Simulated Patient Data
ID: 012-22-3456 Age:14 Ht:100 cm Wt:100 kg Admit: 01-Jan-1998
Vitals
Charts
Setup
Cardiology
Lab Results
Hemodynamic
Ventilation
Neurology
240
Screen Name
Cardiology
System Defaults List
Select A Default
295
Select A Default
Cardiology
Lab Results
Hemodynamic
Ventilation
Neurology
Setup6
Setup7
Setup8
Setup9
Setup10
235a
2510
Trend Panel 1
HR
PVC/min
%Pace
STI
Trend Panel 2
ART D
ART S
ART M
2530
Trend Panel 3
PA D
PA S
PA M
282
270
Available Parameters
HR
%Pace
PVC/min
RESP
ART D
ART S
ART M
PA D
PA S
PA M
PWP
CVP
RA
PLS
SpO2
SvO2
CCO
288
286
263
HR
PVC/m
%Pace
etCO2*
iCO2*
etO2*
iO2*
etN2O
iN2O
PIP
PEEP
MAP
2550
284
272
287
289
Apply
Undo
290
292
09.09 SIEMENS
3000

FIG. 3D